**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, DC 20554**

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| In the Matter of | ) | |
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| AT&T and NTCA Petitions on Transition from | ) | GN Dkt. No. 12-353 |
| Legacy Transmission Platforms to | ) | |
| Services Based on Internet Protocol | ) | |
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## COMMENTS OF MOBILE FUTURE

Mobile Future, an association of wireless technology businesses and non-profit organizations, respectfully submits these comments in response to petitions filed by AT&T and the National Telecommunications Cooperative Association ("NTCA") concerning the ongoing transition to an all-IP network.[1] Since its inception, Mobile Future's mission has been to encourage a policy environment which supports continued investment and innovation in the nation's mobile ecosystem and the next generation broadband networks and services that support it. As such, we believe the inevitable shift away from narrowband, analog networks to all-IP digital broadband networks is critical to help grow the nation's economy and connect American consumers in new and innovative ways. Mobile Future agrees with President Obama's vision of "harness[ing] new ideas and technology" to "empower our citizens with the skills they need to

[1] *See* AT&T, Petition to Launch a Proceeding Concerning the TDM-to-IP Transition (filed Nov. 7, 2012) ("AT&T Petition"); Petition of the National Telecommunications Cooperative Association for a Rulemaking to Promote and Sustain the Ongoing TDM-to-IP Evolution (filed Nov. 19, 2012) ("NTCA Petition").

work harder, learn more, [and] reach higher,"[2] and believes that next-generation wireless broadband and IP-based infrastructures will play a central role in realizing that vision. The shift to IP is particularly important to ensure the future for mobile broadband communications, which increasingly rely on the packetized Long Term Evolution ("LTE") standard. Mobile Future therefore commends the Federal Communications Commission ("FCC" or "Commission") for seeking comment on these petitions[3] and urges the Commission to take action here to promote that transition in order to sustain the innovation and investment necessary to our national success. In particular, the Commission should consider the elimination of outdated regulation intended for the narrowband, analog era of the past, which distorts competition and fails to reflect the realities of the digital broadband era and a highly competitive, fast evolving communications marketplace. If the Commission declines to remove such regulation comprehensively, it should consider pilot programs along the lines advocated by AT&T.

## I. THE IP TRANSITION IS CRITICAL TO CONSUMER INTERESTS

The shift to all-IP networks will confer tremendous benefits on American consumers, vastly expanding the functionalities available to every American from their mobile handsets or other devices, and promote future investment and innovation in our nation's next-generation critical broadband infrastructure. IP networks promise to revolutionize how Americans communicate, work, play, learn, treat illnesses, and respond to emergencies, advancing the nation's competitiveness and economic growth along the way.

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[2] *See* The White House, Inaugural Address by President Barack Obama, *available at* http://www.whitehouse.gov/the-press-office/2013/01/21/inaugural-address-president-barack-obama.

[3] *See* Public Notice, *Pleading Cycle Established on AT&T and NTCA Petitions*, 2012 FCC LEXIS 5063 (rel. Dec. 14, 2012).

These benefits are in no way abstract or hypothetical. Indeed, the wireless world is *particularly* reliant on the migration to IP networks. "In contrast to the circuit-switched model of previous cellular systems, Long Term Evolution (LTE)" – which has become the leading standard for fourth-generation ("4G") mobile wireless service – "has been designed to support only packet-switched services," and "aims to provide seamless Internet Protocol (IP) connectivity between user equipment (UE) and the packet data network (PDN), without any disruption to the end users' applications during mobility."[4] As the nation migrates more fully to an all-IP infrastructure, users relying on LTE will enjoy increasingly faster speeds and reliable services compared to those that traverse the legacy TDM network. Of course, IP will also expand the very capabilites of mobile devices and networks, permitting users to exchange not only voice communications but video files, documents, images, and other content that the TDM network was never designed to carry. The mobile future is necessarily an IP-based future.[5]

IP networks are already expanding the possibilities for consumers. Examples of how these networks can be put to use include:

- myaNumber, an IP-based service allowing children to remember just one telephone number, which is then associated with a list of numbers, such that when the child calls the number, the server tries to reach each of the associated

[4] Alcatel Lucent, Strategic White Paper, *The LTE Network Architecture: A comprehensive tutorial* at 1, available at http://www.alcatel-lucent.com/wps/ocumentStreamerServlet?LMSG_CABINET=Docs_and_Resource_Ctr&LMSG_CONTENT_FILE=White_Papers/CPG0599090904_LTE_Network_Architecture_EN_StraWhitePaper.pdf. Although it is possible to translate packetized LTE voice streams to communicate with analog Time Division Multiplex ("TDM") infrastructure (and vice versa), this process sharply limits the ability to take advantage of IP's unique and vast consumer and network capabilities.

[5] Of course, as NTCA points out, the IP migration affects all providers, whether fixed or mobile, and small rural carriers have already deployed broadband to the great majority of their customers. *See* NTCA Petition at 3.

numbers, in a sequence determined by the adult customer, until reaching an adult.[6]

- GAVA, a new offering from Gefen, permits homeowners to use smartphones and tablets to control remotely a house's internal systems, including audio/video devices, window shades, lighting, Blu Ray players, Apple TVs, and other appliances.[7]

- Pebble, an IP-based smartwatch that connects to a user's other devices to notify the owner of incoming calls, messages and appointments, track a user's exercise, control music selection, interact with social media, provide weather alerts, and otherwise keep the wearer connected.[8]

Applications and products like these are made possible by IP-based networks, and require such networks in order to function. The Commission should take action to promote the ubiquitous deployment of IP infrastructure to ensure that consumers continue to enjoy the manifold benefits such infrastructure offers.

## II. THE COMMISSION SHOULD SET INCENTIVES TO PROVIDERS TO PROMOTE THE TRANSITION TO IP INFRASTRUCTURE

While the migration to all-IP networks offers great benefits to American consumers, government can help facilitate and encourage – and not impede – investment in this architecture. As the Commission has recognized, the policy tools at its disposal can and should be used to "help remove obstacles to progress toward all-IP networks."[9] The Commission has the ability to promote the rapid migration toward IP networks, and it should take the opportunity to do so here, whether on a comprehensive and permanent basis or on a limited trial basis of the type proposed

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[6] *See generally* http://myanumber.com/.

[7] *See generally* http://www.electronichouse.com/article/gefen_launches_ip-based_home_control_system/.

[8] *See generally* http://getpebble.com/.

[9] *CAF Order* ¶ 793. *See also id.* ¶ 648 (recognizing need to enact reform in order to "promote innovation by eliminating barriers to the transformation of today's telephone networks into the all-IP broadband networks of the future").

by AT&T.[10] Such efforts to promote deployment of next-generation infrastructures are the best means of fulfilling "the core statutory objectives of protecting consumers, promoting competition, and ensuring universal service."[11]

The Commission should broadly consider using positive incentives to promote the migration to IP infrastructure. In particular, the Commission should consider repealing, or forbearing from the application of, legacy regulations that are not appropriate in today's vibrant communications ecosystem, and which peremptorily require American companies to commit considerable capital expenditures in order to sustain outmoded architectures and outdated technologies – investment which could more productively be directed to the next-generation IP services American consumers increasingly want and need. Nearly 80 years old, and incorporating the precepts of even older legislation, the Communications Act was designed to suit the needs of a market quite distinct from today's, and characterized by vastly different technology. The analog, narrowband networks of 1934 continued to dominate the communications landscape even in 1993 and 1996, when Congress established the current legislative framework for wireless and wireline regulation.[12] In many respects, the Commission's current regulatory framework continues to reflect the assumptions arising from those legacy networks. Its rules often presume that the market is characterized by "siloed" providers offering strictly differentiated services – cable providers offering video service over coaxial cable, wireline providers offering voice services over copper wire, wireless providers offering mobile voice service using the electromagnetic spectrum, and so on. In addition, the

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[10] *See* AT&T Petition at 20-23.
[11] NTCA Petition at i, 5.
[12] *See* Omnibus Budget Reconciliation Act of 1993, Pub. L. 103-55; Telecommunications Act of 1996, Pub. L. 104-104.

regulations in many cases still presume that each product market is served by a single provider in each geographic area, which must be regulated as a monopoly.

This vision, however, is both moribund and obsolete. Today, cable, wireline, and wireless compete against one another to provide voice, video, and data services, using the broadband capabilities of their networks to create innovative new offerings that could not have been contemplated in 1996, much less 1934. By the first half of 2012, 36% of households had "cut the cord," relying only on wireless phones for voice service.[13] About 30 million telephone and interconnected VoIP lines in America are provisioned over cable plant;[14] whereas, as of the end of 2010, telecommunications providers such as AT&T and Verizon were providing video service to more than 6.5 million customers[15] and, according to a 2012 report, approximately 450 rural LECs offer video services.[16]

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[13] Centers for Disease Control and Prevention, *Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January–June 2012*, *available at* http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201212.PDF.

[14] According to the Wireline Competition Bureau's most recent data, as of December 2011, non-ILECs provisioned 27.8 million lines using coaxial cable. Local Telephone Competition: Status as of December 31, 2011, Industry Analysis and Technology Division, Wireline Competition Bureau at Table 6 (January 2013), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0114/DOC-318397A1.pdf.

[15] *See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 27 FCC Rcd 8610, 8622 ¶ 32 (2012). *See also* SNL Kagan, Cable TV Investor: Deals & Finance, Dec. 28, 2013 at 3 ("Overall, total telco video subs nearly doubled in the top 25 markets in the last three years, ending the third quarter 2012 with a 13% market share versus 7% in third quarter 2009.").

[16] *See* Comments of The Organization for the Promotion and Advancement of Small Telecommunications Companies and The National Telecommunications Cooperative Association, MB Docket No. 12-203, at 2 (filed Sept. 10, 2012) (citing NTCA, 2011 BROADBAND INTERNET AVAILABILITY SURVEY REPORT (March 2012), http://www.ntca.org/images/stories/Documents/Advocacy/SurveyReports/2011ntcabroadbandsurveyreport.pdf.

Under these circumstances, legacy regulations rooted in antiquated notions of silos and monopolies undercut providers' incentives to deploy new IP infrastructure. For example, regulations that are applied solely to wireline providers, such as burdensome limitations on discontinuance of service and retirement of legacy facilities, require those entities to devote significant capital to maintain legacy networks that could better be used to expand their IP networks. AT&T cites one study estimating that incumbent LECs "collectively have devoted approximate half of their wireline capital expenditures in recent years to the upkeep of their legacy networks."[17] That capital would be far better spent in expanding the reach of mobile IP broadband networks. To ensure migration to these high-speed, advanced networks of tomorrow, the Commission must take a hard look at these regulations and remove those that no longer serve any valid purpose.

The shift to a new regulatory framework need not occur in one fell swoop. AT&T's petition proposes a "pragmatic and incremental approach" involving "trial runs" for the transition. Under AT&T's approach, providers would select particular wire centers in which they would migrate to an all-IP architecture, and those territories would be subjected to more streamlined regulation. While Mobile Future looks forward to reviewing parties' specific proposals, we believe that this general framework would provide for a beneficial "test run," permitting the Commission to promote network migration while also monitoring the effects, if any, of eliminating outdated and discriminatory regulation.

[17] AT&T Petition at 12 & n.17.

## III. CONCLUSION

As our nation, our consumers, and our innovators proceed on America's promising – and ineluctable – transition to IP, Mobile Future commends the Commission for opening this proceeding and for carefully assessing the critical issues and opportunities presented by this transition. The Commission should continue to recognize the myriad benefits offered by all-IP networks – benefits for consumers in terms of available services and applications, and benefits to the economy in terms of innovation, investment, and growth – and should take action to promote this next IP-driven phase of our nation's mobile future.

Respectfully submitted,

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